

REMARKS

The present amendment is hereby submitted with an accompanying Request for Continued Examination under 37 CFR §1.114(d), and payment of the fee therefore under 37 CFR §1.17(e).

In the final Office Action mailed on 11/28/2006 claims 17-24 were rejected under 35 U.S.C. §112, second paragraph, as being allegedly indefinite. Those rejections are now moot because claims 17-24 have been canceled.

Also in the final Office Action mailed on 11/28/2006, claims 17, and 20-24 were rejected under 35 U.S.C. §102(e), as being allegedly anticipated by Braunheim et al (US 6,754,044, hereinafter "Braunheim"). Those rejections are now moot because claims 17, and 20-24 have been canceled.

Also in the final Office Action mailed on 11/28/2006, claims 1-9, 11, and 18-19 were rejected under 35 U.S.C. §103(a), as being allegedly obvious over Braunheim. The rejection of claims 18-19 is now moot because claims 18-19 have been canceled. Claims 1, and 7-8 have been amended herein. The rejection of claims 1-9 (as amended), and 11 under 35 U.S.C. §103(a) is hereby traversed.

Claim 1 (as amended) expressly requires that the first metal plating is plated on the same surface from which the at least one surface protrusion protrudes. Support for the amendment of claim 1 can be found in the present patent application as originally filed at least in Fig. 4. At least because Braunheim does not teach or suggest this claim limitation, the rejection of claim 1 under 35 U.S.C. §103(a) should be withdrawn.

Specifically, Braunheim teaches two types of metal platings:

(1) soft metal plating for the purpose of masking regions where no carbide or nitride protrusions are desired (see Braunheim col. 13, line 66 to col. 14, line 3; see *also* Braunheim col. 16, lines 19-23), and

(2) hard metal plating as an alternative method of surface hardening unrelated to protrusions (see Braunheim col. 17, line 26-27).

Neither of these platings or purposes would suggest to one of ordinary skill in the art to plate the same surface from which the at least one surface protrusion protrudes

(as required by pending claim 1 as amended). Quite the contrary, Braunheim's plating of the first type intentionally prevents the creation of surface protrusions, and Braunheim's plating of the second type is an alternative method of surface hardening totally unrelated to surface protrusions. Accordingly, motivation to modify the Braunheim reference is absent and thus Braunheim can not support a proper prima facie case of obviousness of claim 1. Applicants therefore request that the rejection of claims 1-9 and 11 under 35 U.S.C. §103(a) be withdrawn.

Furthermore, neither of Braunheim's two plating types suggests a thickness range to secure or cover surface protrusions since no such purpose was ever contemplated in Braunheim. Indeed, improper "hindsight" based on the present application would be required to provide any motivation to modify Braunheim to accomplish such a purpose (securing or covering protrusions) that was never contemplated in Braunheim, via a thickness range that also was never disclosed in Braunheim (i.e. two-fifths to twice the protrusion height, as required by pending claim 1). For this additional reason, motivation to modify the Braunheim reference is absent and thus Braunheim can not support a proper prima facie case of obviousness of claim 1. Applicants therefore request that the rejection of claims 1-9 and 11 under 35 U.S.C. §103(a) be withdrawn.

Moreover, Braunheim actually teaches away from the presently claimed thickness range because the presently claimed thickness range might completely cover Braunheim's surface protrusions, rendering the hardness of such protrusions irrelevant and frustrating Braunheim's purpose for such protrusions. For example, Braunheim teaches that the surface protrusions preferably be "significantly harder than the rest of the component" (see Braunheim col. 11, lines 9-10). This important feature of Braunheim's invention enables Braunheim's surface protrusions to dig into a softer mating surface and thereby increase torque retention in much the same way cleats on the sole of a shoe can dig into turf to increase traction. Covering Braunheim's protrusions could frustrate this purpose of Braunheim just as packing mud between and over the cleats on the sole of a shoe could frustrate their purpose. Of course there would be no motivation to modify the Braunheim reference to have a plating thickness

range that might frustrate the intended operation of the invention disclosed in the reference. For this additional reason, Braunheim does not support a proper prima facie case of obviousness of claim 1. Applicants therefore request that the rejection of claims 1-9 and 11 under 35 U.S.C. §103(a) be withdrawn.

Claim 4 is further distinguished from Braunheim because claim 4 additionally requires a second metal plating applied over the first metal plating. There is absolutely no teaching or suggestion in Braunheim to apply a second metal plating applied over the first metal plating. Providing a second metal plating is expensive and therefore would not "have resulted through routine engineering optimization and experimentation" absent the teachings of the present patent application to provide a specific motivation. The examiner has not identified any motivation to modify Braunheim to include this expensive additional layer, and the Braunheim reference itself lacks any such motivation. For example, neither of the aforementioned two types of metal platings that Braunheim discloses requires or would apparently benefit from a second plating layer. Specifically, (1) Braunheim's plated masking layer can serve to mask regions where no protrusions are desired without the need for any second plating layer, and (2) the importance of the hardness of Braunheim's hard surface plating would be diminished by any addition of a second plating layer. Thus, motivation to modify the Braunheim teachings to add a second plating layer is utterly absent in Braunheim, and for this additional reason Braunheim can not support a proper prima facie case of obviousness of claim 4 (or the claims depending from claim 4). Applicants request that the rejection of claims 4, 8, and 11 under 35 U.S.C. §103(a) be withdrawn for this additional reason.

Claims 7-8 (as amended) are further distinguished from Braunheim because these claims additionally require that the first metal plating have a columnar structure. Support for the amendment of claims 7-8 can be found in the present patent application as originally filed at least in Fig. 5 and in the penultimate paragraph on page 17. There is absolutely no teaching or suggestion in Braunheim that the first metal plating have a columnar structure. Moreover, no motivation is provided in the Braunheim reference to modify Braunheim's teachings to include a columnar structure. For this additional reason, Braunheim can not support a proper prima facie case of obviousness of claims

7-8 and Applicants request that the rejection of claims 7-8 under 35 U.S.C. §103(a) be withdrawn for this additional reason.


Also in the final Office Action mailed on 11/28/2006, claims 1-8, 10, 17, and 20-24 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being allegedly unpatentable over the certain claims of co-pending Application No. 10/241,609. The present patent application and co-pending Application No. 10/241,609 are commonly owned, and a terminal disclaimer in compliance with 37 CFR 1.321(c) has been submitted herewith, hence the provisional rejections have been overcome.

In view of the foregoing amendments and remarks, and the accompanying RCE and terminal disclaimer, Applicants respectfully submit that the pending claims are now in condition for allowance and requests reconsideration of the rejections. If it is believed that a telephone conversation would expedite the prosecution of the present application, or clarify matters with regard to its allowance, the Examiner is invited to contact the undersigned attorney at the number listed below.

The Commissioner is hereby authorized to charge payment of any required fees associated with this Communication or credit any overpayment to Deposit Account No. 50-4119.

Respectfully submitted,

Date: 27FEB07

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